

# VA-ALERT W

Full Tank Alarm for sewage tanks

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**Keep this manual for  
future use!**

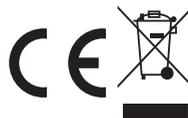


**Afriso Ema AB**

Kilvägen 2, 232 37 Arlööv  
Sweden

Phone +46-40-92 20 50  
Fax +46-40-19 33 58

[www.afriso.se](http://www.afriso.se)



## Function Description

VA Alert W sewage tanks is a wireless alarm for (closed) sewage tanks. The system consists of a receiver unit for indoor as well as a battery-powered transmitter module (VA Alert W / T) sensor for placement under the cap to the tank. This unit has an estimated run time of approximately 12 months. The central unit has built-in relay which enables connection to eg alarm lamp or SMS alert.

VA Alert W is for cisterns / tanks containing electrically conductive fluids. Full Tank Alarm is given when the tank content have reached to the two electrodes at the VA probe's lower part. The transmitter unit is battery powered and powered by 2 AA batteries. The unit has built-in warning of low battery voltage which warns in good time before the battery is depleted (about 2-3 months before).



### **Safety / important to consider**

- Carefully read the installation manual *before assembly*
- The alarm apparatus may only be installed in dry indoor spaces.
- The equipment may only be used for indication of high level alarm in the sewage tanks or water tanks.
- Not to be used in conjunction with oil or petrol!
- If the idea is to be buried, ensure that the sensor can be accessed simply by mounting a manhole, etc.
- The sensor has a standard 2 m cable. Longer needed should the sensor cable extended by Cable: RKK 2 x 0.75 mm<sup>2</sup>. Use not multicore cable (for pump control signals or the like).

## Components parts

### VA-ALERT W



### VA-probe with a transmitter module



 **Alarm unit must not be disposed with household garbage, but should be handled as electronic waste.**

## Control Device

Check the alarm function

Short the sensor input with a paper clip or similar, alternatively connect the sensor and dip the electrode in water. Within about 30 seconds, the buzzer sounds in the receiver and the red LED will flash.

Press the button on the receiver -> sound is muted. Remove the short circuit, alternatively, take the transmitter out of the water. The red LED should go off within 30 seconds. Testing the alarm function is OK.

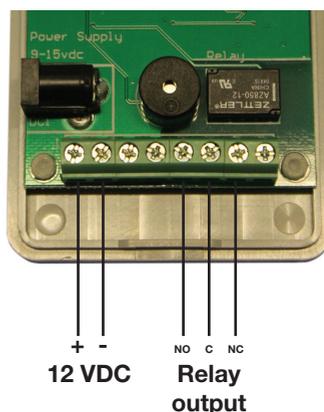


Hold down the button and insert the battery. When both LEDs are lit for about 1 second at the same time, release the button now. Both LEDs show flashing, 10 seconds in between. After about 10 minutes a return to normal operation.

If necessary, move the receiver unit to a location where the transmitter's signal can be received safely.

## External connection

### VA-Alert W/R



## Range Test

Before assembly it must be tested on the location of the receiver can receive the radio signal from the transmitter. Place the receiver at the desired location and connect the AC adapter. Place the transmitter module in place in the well during the "cap". Remove the battery from the battery holder.

**NOTE!** There are many things that can interfere with the radio signal. For example, cars and bicycles placed between transmitters and receivers can adversely affect the signal. Therefore, it is very important that the same conditions also apply after range tests.

*Subject to design modifications.*

## Installation

Installation should be done by qualified and competent electrician.

### Mounting the probe:

For the probe through the tank connection and screw the sensor connector in the cistern sleeve.

Insert the cable through the gland and connect the sensor cable as shown below. Insert the batteries and slide the circuit board into the housing. Press the lid and tighten the cable gland.



Install the mounting bracket in a suitable place in the tank neck during the manhole cover. See picture below. Use the supplied plugs and screws.



Mounted on the far side in relation to the receiver for best signal.

Place the transmitter electronics of the holder and close the holder. Place the electronics with the cable pointing downwards and a position as high up as possible in the well to ensure that good scope as possible. See picture below.



Placing the sensor in the tank is suitably in the sleeve on the tank. The sensor has a 1" connection. Height tank is adjusted by sliding the sensor to the desired position and fixed by tighten the adjustment screw in 1" terminal. Depending on the type of tank/neck tank sensor may have to be mounted in other ways. For instructions, contact the tank manufacturer. See examples below.



## Functional testing:

### Control Device

- The alarm consists of a transmitter unit VA Alert W / T with a conductive sensor for placement in the sewage tank / cistern. This unit is powered by 2 AA batteries.
- Receiver VA Alert W / R for placement on the wall indoors in a dry location. The unit is powered by an included power supply unit (12VDC).



### Pairing of transmitter and receiver (is already done upon delivery):

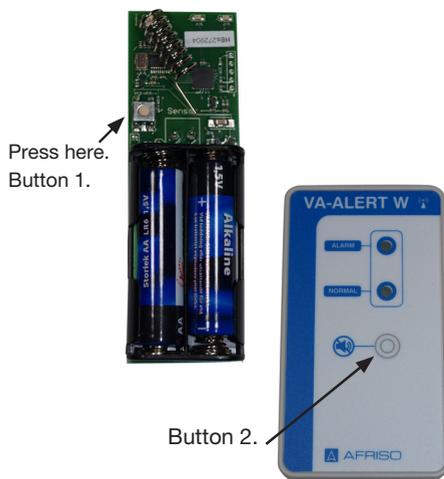
For use, the transmitter and receiver are paired with each other. This is done upon delivery. If the transmitter or receiver is changed, the pairing must be redone.

Open the transmitter part by pulling in one cover. The lid is sealed with O-ring (see picture above). Remove the circuit board and insert 2 AA batteries in the battery holder.

Connect the AC adapter to the receiving device. The unit should be flashing green and red and a beep is emitted. Thereafter the unit flashes quickly about every 3 seconds.

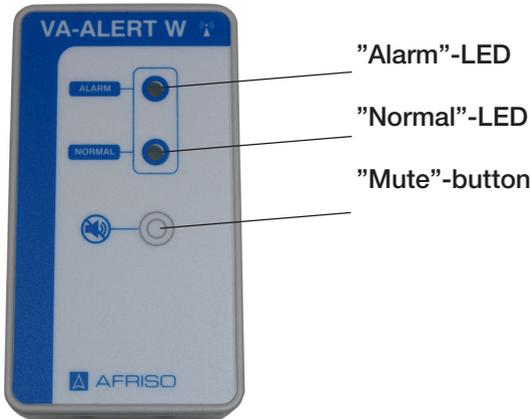
### To pair the devices

Hold button 1 down until the red flash and green flash simultaneously every other time. Now it is possible to pair the sender and receiver. Keep pressing button 1 down and press also down button 2 on the receiver until green LED remains lit. Continue to hold down both buttons until the green light LED disappears and the buzzer sounds for approximately one second. Release the buttons, the pairing is complete.



**Operation:**

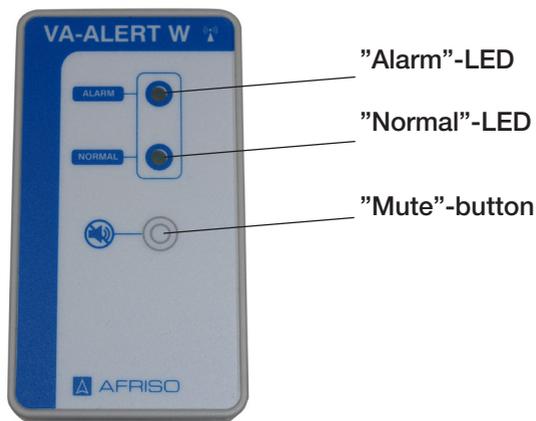
CAUSE/ERROR	SOLUTION
<p><b>Normal operation/No alarm</b></p> <p>Green LED flashes briefly every two seconds.</p>	<p>Normal operation - no action</p>
<p><b>Tank full</b></p> <p>The built-in buzzer beeps and the red LED flashes briefly every two seconds.</p>	<p>Order emptying of the tank!</p>
<p><b>Low battery in the transmitter unit</b></p> <p>The built-in buzzer beeps and the red and the green LED flashes briefly every two second. (Can also be sensors in the liquid).</p>	<p>Change the batteries (2 AA batteries)</p>



*Subject to design modifications.*

**Troubleshooting:**

CAUSE/ERROR	SOLUTION
No LED flashing	Check that the battery eliminator is connected.
Weak radio signal (Radio signal not received within 24 hours) Indicated by a red LED flashing twice.	Check range if necessary replace the placement of the receiver unit. Check the batteries in the transmitter unit.
Sensors in the liquid but not alarm unit.	As above. Note that the transmission of the the alarm is repeated every 6 hours.
Sensors in the air but the unit does not alarm.	As above. Note that sending sensors that are in the air is repeated every 6 hour.



*Subject to design modifications.*

## Technical data:

VA-ALERT W/(R) - Alarm unit - Receiver

Power Supply:	12 V Plug-in Power alt 12 VAC-trafo.
Temperature Range:	0 – 40 °C (operating) -25 – +40 °C (during storage)
Relay Contact:	Voltage free Um 75 VDC, Im 2 A
Radio frequency receivers:	433 Mhz (free band)
Degree of protection:	IP 42
Measurements:	62 x 112 x 32 mm (BxHxD)
Weight:	85 g

VA-ALERT W/(T) - Alarm unit - Transmitter

Measuring principle:	Conductive
Power Supply:	2 st AA-batteries Alkaline type.
Radio frequency transmitter:	433 Mhz (free band)
Measurements:	ø 50 x 110 mm (diam x L)
Weight:	130 g
Temperature Range:	-15 – +40 °C (during storage)
Degree of protection:	IP 65

## Declaration

**Manufacturer:** Afriso Ema AB,  
Kilvägen 2, SE-232 37 Arlöv

**Product:** VA-ALERT W, Full Tank Alarm  
for sewage tanks.

**Technical Details:** DC 4,5 V, IP42  
The above-mentioned product  
complies with the following European  
directives and standards.

**Directive for electromagnetic compatibility:**

- EN 61000-6-4 (2007)
- EN 61000-6-1 (2007)

**Low Voltage Directive:**

- EN 61010-1 (2010)

Sign.



Urban Nilsson

Technical Manager

Date: 2015-03-11



**Afriso Ema AB**

Kilvägen 2 • 232 37 Arlöv • Sweden  
Phone: +46-40-92 20 50 • Fax: +46-40-19 33 58

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